

# W5YI REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

## Dits & Bits

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## Ham License Question Revision Schedule Released

As of January of this year, preparation and administration of all Amateur Radio Operator license examinations are now completely handled by the amateur community itself. No longer is the FCC in the testing business at all. Their only function is in an oversight (supervisory) capacity.

Volunteer Examiner Coordinators (VEC's) attending their 1987 Conference held in Atlanta on July 10th established a three year question pool revision cycle during which time all five (Novice, Technician, General, Advanced and Extra Class) written elements are to be reviewed and changed as necessary and new question pools implemented.

Thirteen VEC groups elected a Question Pool Committee (QPC) made up of Jim Clary, WB9IHH (ARRL-VEC, Chairman), R.C. Smith, W6RZA (Greater Los Angeles ARG-VEC) and Ray Adams, N4BAQ (Western Carolina ARS-VEC) to develop and maintain the question pools on behalf of all VEC's and volunteer examiners. The QPC will serve for renewable one year terms. (Your author, Fred Maia/W5YI-VEC was named as alternate committee member.)

Several question pool revision schedules were considered. The committee finally decided to implement examinations on November 1st. This would give applicants time to study the new license preparation material

before the Spring hamfest (and peak testing) season.

It was also agreed to have a nine month period between question pool finalization and implementation - that is, when the revised questions are first used in actual examinations. Each question pool will be placed in the public domain once released by the QPC. The nine month period will allow VEC's and license preparation publishers adequate time to print new tests and publish study material.

Each written test element will be completed during a one year preparation period. The "timeline" appears on the next page. The QPC will solicit input from the amateur community on each pool's outline (syllabus) and individual questions which will be considered simultaneously. All amateurs, volunteer examiners and VEC's are invited to participate in the test pool re-evaluation process.

According to the 1982 enabling legislation, "Preparing VE's" (as they are called) must meet certain license class prerequisites. All amateurs, Technician class and higher, may suggest changes to the Novice (Element 2) pool. Advanced and Extra Class may participate in the Technician and General Class (3A and 3B) revision. Only Extra Class level amateurs, however, may suggest changes to Elements 4A, 4B, Advanced and Extra Class.



## EXTRA CLASS POOL TO BE FIRST REVISED

The Extra Class (Element 4B) will be the first question pool worked on. The new 4B question pool is scheduled to go into effect November 1, 1988. The Novice (Element 2) and Technician (Element 3A) will be considered together and implemented on November 1, 1989. Finally, the revised General Class (Element 3B) and Advanced (Element 4A) will be put into effect on November 1, 1990. Another new Element 4B Extra Class pool will again be released effective November 1, 1991 - and so forth.

Thus, all amateur radio operator license study material currently in the marketplace will be current for at least another year. It should be recognized, however, that some questions could be amended in between scheduled revisions due to changes in FCC regulations.

## TIMELINE FOR QUESTION POOL REVISION

Function:	Novice/ Technic. 2, 3A	General/ Advanc. 3B, 4A	Extra Class 4B (*)
Syllabus Input	2/1/88	2/1/89	8/1/87
Syllabus Closes	4/1/88	4/1/89	9/1/87
Questions Input	2/1/88	2/1/89	8/1/87
Questions Close	10/1/88	10/1/89	12/1/87
Pool Released	2/1/89	2/1/90	3/1/88
Implementation	11/1/89	11/1/90	11/1/88

(\* = The Element 4B schedule does not track exactly with those of other elements because the time line was not agreed to by all QPC members until early August.)

## HERE'S HOW YOU CAN HELP!

All questions in each of the various pools are based on its syllabus -- or outline. Any Extra Class amateur can submit new topics for the Element 4B syllabus and/or new or revised questions on the current syllabus. We will publish the current topics on each of the pools when a specific syllabus is to be considered. The following is the Element 4B Syllabus. Remember that you only have until September 1st to submit syllabus changes. You may submit new element questions, however, until December 1st.

## ELEMENT 4(B) SYLLABUS

### Subelement 4BA - Commission's Rules

- 4BA-1 Examination Elements. §97.21
- 4BA-2 Examination Requirements. 97.23
- 4BA-3 Examination Credit. 97.25
- 4BA-4 Examination Procedure. 97.26
- 4BA-5 Telegraphy Exam. Preparation. 97.27(b)
- 4BA-6 Written Exam. Preparation. 97.27
- 4BA-7 Exam. Administration 97.28 (a/e/h/i/j)
- 4BA-8 V.E. Compensation. 97.31(c)
- 4BA-9 V.E. Requirements. 97.31(d)
- 4BA-10 V.E. Accreditation. 97.31(e)
- 4BA-11 Temp. Operating Authority. 97.35
- 4BA-12 Reimbursement for Expenses. 97.36
- 4BA-13 Emission Purity. 97.73
- 4BA-14 Point of Communications. 97.89
- 4BA-15 Portable & Mobile Operation. 97.95
- 4BA-16 Operation on Ship or Aircraft. 97.101
- 4BA-17 RACES purpose. 97.116
- 4BA-18 RACES definition. 97.163(a)
- 4BA-19 RACES registration. 97.175
- 4BA-20 RACES operator requirements. 97.177
- 4BA-21 RACES operator privileges. 97.179
- 4BA-22 Frequencies Avail. to RACES. 97.185
- 4BA-23 RACES point of communications 97.189
- 4BA-24 RACES permissible communic. 97.191
- 4BA-25 Limitations on use of RACES frequencies. 97.185(b), (c)
- 4BA-26 Purpose of reciprocal agreement rules 97.301(b)
- 4BA-27 Reciprocal permit. 97.303
- 4BA-28 Reciprocal operating privileges 97.311
- 4BA-29 Reciprocal operating station identification. 97.313
- 4BA-30 Purpose of the Amateur-Satellite Service. 97.401
- 4BA-31 Space operation definition. 97.403(a)
- 4BA-32 Earth operation definition. 97.403(b)
- 4BA-33 Telecommand operation definition. 97.403(c)
- 4BA-34 Telemetry definition. 97.403(d)
- 4BA-35 Eligibility for Space Operation. 97.407
- 4BA-36 Eligibility for Earth Operation. 97.409
- 4BA-37 Eligibility for Telecommand Operation 97.411
- 4BA-38 Frequencies available to Amateur Satellite Service. 97.415
- 4BA-39 Special provisions for space operation. 97.417
- 4BA-40 Special provisions for telemetry. 97.419
- 4BA-41 Special provisions for telecommand. 97.421
- 4BA-42 Special provisions for earth operation. 97.422



- 4BA-43 Space operation notifications. 97.423
- 4BA-44 Volunteer-Examiner Coordinator definition. 97.503(a)
- 4BA-45 Volunteer-Examiner definition. 97.503
- 4BA-46 VEC qualifications. 97.507
- 4BA-47 VEC agreement. 97.511
- 4BA-48 Examination scheduling. 97.513
- 4BA-49 Coordinating VE's 97.515

## Subelement 4BB - Operating Procedures

- 4BB-1 Use of amateur satellite.
- 4BB-2 Emission C3F and A3F operation.

## Subelement 4BC - Radio Wave Propagation

- 4BC-1 EME moonbounce
- 4BC-2 Meteor burst
- 4BC-3 Trans-equatorial
- 4BC-4 Long path
- 4BC-5 Crooked path
- 4BC-6 Gray line

## Subelement 4BD - Amateur Practices

- 4BD-1 Spectrum analyzer
- 4BD-2 Logic probe
- 4BD-3 Vehicle noise suppression
- 4BD-4 Direction finding techniques

## Subelement 4BE - Electrical principles

- 4BE-1 Photoconductive effect
- 4BE-2 Exponential charge/discharge
- 4BE-3 Time constant, R-C and R-L circuits
- 4BE-4 Impedance diagrams
- 4BE-5 Impedance of R-L-C networks at a specified frequency
- 4BE-6 Algebraic operations using complex numbers: real, imaginary, magnitude, angle

## Subelement 4BF - Circuit Components

- 4BF-1 Field-effect transistor
- 4BF-2 Operational amplifier
- 4BF-3 Phase-locked loop
- 4BF-4 7400-series TTL digital integrated circuits
- 4BF-5 4000 Series CMOS digital
- 4BF-6 Vidicon
- 4BF-7 Cathode ray tube

## Subelement 4BG - Practical Circuits

- 4BG-1 Digital logic circuits
- 4BG-2 Digital frequency divider circuits
- 4BG-3 Active audio filters
- 4BG-4 Receiver noise figure, sensitivity
- 4BG-5 Receiver selectivity
- 4BG-6 Receiver dynamic range
- 4BG-7 Integrated operational amplifier
- 4BG-8 FET common-source amplifier

- 4BG-9 preselector
- 4BG-10 Single stage amplifier frequency response.

## Subelement 4BH - Signals & Emissions

- 4BH-1 Pulse modulation
- 4BH-2 Digital signals
- 4BH-3 Amplitude companded single sideband
- 4BH-4 Information rate vs. bandwidth
- 4BH-5 Peak amplitude
- 4BH-6 Peak-to-peak values

## Subelement 4BI - Antennas and Feed lines

- 4BI-1 Space communication antennas
- 4BI-2 Isotropic radiator
- 4BI-3 Phased vertical antennas
- 4BI-4 Rhombic Antennas
- 4BI-5 Matching antenna to feed line
- 4BI-6 Characteristics of 1/8 wavelength feed line.
- 4BI-7 Charact. of 1/4 wavelength feed line
- 4BI-8 Charact. of 3/8 wavelength feed line
- 4BI-9 Charact. of 1/2 wavelength feed line

Extra class level amateurs should submit your recommendations on the Element 4(B) question pool to one of the following:

Jim Clary/WB9IHH, ARRL-VEC, 225 Main St., Newington, CT 06111; R. C. Smith/W6RZA, GLAARG-VEC, 9737 Noble Ave., Sepulveda, CA 92343 or Ray Adams, N4BAQ, WCARS-VEC, 5833 Clinton Hwy.#203, Knoxville, TN 37912.

Suggestions for new or revised questions should be submitted one to an 8 1/2"X11" sheet of paper indicating:

- (1.) The Element 4B syllabus topic (i.e. 4BA-1)
- (2.) The new/revised question
- (3.) The answer with or without suggested distractors (multiple choice wrong answers.)
- (4.) The answer reference. (i.e. the source of the correct answer.)
- (5.) Your name/address/call sign and class of license.

Here is your opportunity to influence the amateur radio operator question pools. The current Extra Class question pools (with distractors and answers) are very widely published. (We have one available for \$4.00 + \$1.25 postage.) Remember that suggestions for new Extra Class topics are due no later than September 1, new questions by December 1st.



# W5YI REPORT.....

Page #4

September 1, 1987

● Michael T. N. Fitch, FCC Chief Private Radio Bureau, wired the Pan Am Games amateur radio effort and advised them that they were approved to use the numerals "87" in lieu of "9" in their W9PAX call sign at one address only. W9PAX (Pan American X - Roman numeral for "tenth.") is a call sign "loaned" to the Indianapolis Pan American Games station. The station got the FCC telegram one day before they were due to establish the station -- W87PAX has been very much in evidence on the airwaves. The special permission was FCC designated as a "Non-Precedential Waiver" of the Rules - which means that no other waivers of this sort will be considered or authorized. The authority for W87PAX expired on August 23rd. Over 10,000 QSO's were made by the station during the first week (of a three week run) alone - mostly 20 meter SSB - although all bands and modes were used. Confirmations are coming in by the hundreds which are now in the process of being answered! (QSL info: Box 18495, Indianapolis, IN 46218-0495)

● Forest Industries Telecommunications is another that has filed a proposal with the FCC seeking to be named the "Special Call Sign Coordinator" for the Amateur Radio Service. FIT's action is in response to PRB-3, the FCC's program to privatize the issuance of custom ham call signs. FIT has long experience in data base handling of frequency coordination and licensing assistance in the Forest Products Radio Service. They propose to issue one of three requested ham calls of choice on a wallet card for \$25.00. Optional \$5.00 wall certificates available. A \$10.00 credit is issued to the applicant if none of the three requested amateur call signs are available. FIT also proposes to issue club and special events call signs. A special 90 day "priority period" plan would allow amateurs to recover a previously held call sign.

● The Society of Broadcast Engineers (SBE) has filed comments with the Commission opposing the reallocation of 220-222 MHz to narrowband Land Mobile Service. They argue: (1.) The spectrum is not needed by Land Mobile interests and (2.) if authorized would interfere with adjacent amateur repeaters. (3.) Present Amateur utilization is heavy. The ARRL Repeater Directory does not list control, beacon and remote base station use.

## AMATEUR RADIO CALL SIGNS....

issued as of the first of August.

Radio District:	Gp."A" Extra	Gp."B" Adv. Tech/Gen.	Gp."C" Novice	Gp."D"
0	NZ0F	KE0PM	N0III	KB0BAJ
1	NM1K	KC1FC	N1FBI	KA1QWS
2	NY2G	KE2BJ	N2HKS	KB2EES
3	NI3X	KD3DY	N3FQU	KA3SBO
4 (*)	AB4CN	KK4PG	N4QVL	KC4BEH
5 (*)	AA5BM	KG5BI	N5LBS	KB5EAX
6 (*)	AA6DR	KI6WH	N6PZU	KB6TNB
7	WE7A	KF7BX	N7JRF	KB7CRA
8	NX8V	KE8NC	N8IRA	KB8CYY
9	NT9S	KE9FP	N9GTN	KA9ZGO
N.Mariana I.	AH0E	AH0AC	KH0AI	WH0AAG
Guam	KH2E	AH2BR	KH2CR	WH2AKZ
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Palmyra/Jarvis	AH5A			
Hawaii	(**)	AH6AI	NH6LQ	WH6BTQ
Kure Island			KH7AA	
Amer. Samoa	AH8C	AH8AC	KH8AE	WH8AAW
Wake Wilkes Peale		AH9AC	KH9AD	WH9AAG
Alaska	(**)	AL7JB	NL7KW	WL7BPJ
Virgin Is.	KP2T	KP2BI	NP2CE	WP2AFR
Puerto Rico	(**)	KP4NU	WP4JQ	WP4HJF

**NOTES:** \* = All 2-by-1 format call signs have been assigned in the 4th, 5th and 6th radio districts. 2-by-2 format call signs from the AA-AL prefix block now being assigned to Extra Class amateurs.

\*\* = All Group "A" (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico. Group "B" (2-by-2) format call signs now being assigned Extra Class.

## JULY AMATEUR LICENSING STATISTICS....

	July 1985	1986	1987
First Time Amateurs	1,431	2,806	870
Novice Class Upgraded	1,125	1,893	1,224
Technician Upgraded	283	615	237
General Upgraded	369	667	251
Advanced Upgraded	273	431	176
Total Hams Upgrading	2,050	3,606	1,888
Total Dropped/Service	2,416	2,476	1,537
Total Novices Dropped		1,903	1,048
Change/Census(Month)	-985	+1,194	-637
Indiv. Amateurs	410,287	420,193	428,854
Club/Military/RACES	2,792	2,684	2,456
Active Stations	411,079	422,877	431,310
Change in Census (Year)		+2.87%	+2.00%

(Source: FCC, Gettysburg, Penna.)

10 or more Quantity  
\$3.00 plus postage  
5-9 \$2.50 plus postage  
1 Ea. \$1.00 plus postage  
Test Manual: \$4.00 plus postage  
Tech. or Gen. \$4.00 plus postage  
HOLDING AMATEUR RADIO OPERATOR CLASSES?  
and need to be printed  
P.O. Box #10101-N  
W5YI-VEC



## THE WORLD OF ELECTRONICS IN BRIEF....

● Boston's educational WGBH-FM and TV have been given a one year extension (to July 1988) to broadcast programming to the public in a digital format. Advantage of digital transmissions is lower noise and distortion with increased uniform frequency response. A VCR and a special digital audio decoder are needed. Future high definition or advanced television broadcast services may employ digital techniques for the sound portion of the program.

● The FCC has streamlined equipment (type acceptance) approval for Land Mobile (business use) transceivers. No longer will manufacturers have to apply for separate transmitter and receiver certification. Emphasis will now be almost totally placed on the transmitter section since receiver elements have an excellent record of compliance. The Commission also issued a NPRM proposing to do away with issuing manufacturer codes for equipment identification, to delete the requirements to notify the FCC when trade names are changed and to simplify record-keeping requirements. (Amateur equipment need not be FCC approved.)

● Gordon Girton, W6NLG, of the Sunnyvale VEC Group, has petitioned the FCC for a waiver of Section 97.84(a) station identification requirements to allow amateurs to replace their call sign numeral with "200" based on the day of the month. For example: W5YI could become W"200"YI on the 5th, 15th and 25th of each month between September 17, 1987, and December 31, 1988. His proposal is a variation of the recently approved ARRL waiver. He argues that his proposal will help with QSL'ing and will not require that a data base be kept since the FCC will know a call sign's numeral based on the day of the month that an amateur station is monitored. Day 31 will not be used. Petition filed: 8/18/87.

● The Sunnyvale Group also requested that Unlicensed Call Sign Coordinators (UCSC) be appointed to issue temporary 2X3 call sign blocks to ham clubs and VE teams. The clubs and VE teams would then further issue call signs from these blocks to Novice operators who have passed their license requirements -

but who have not yet received their FCC licenses. This would allow Novices to immediately get on the air. Under the Girton system, blocks of 26 call signs would be issued to amateur clubs (WW, WX, WY & WZ by 3 letters) and VE teams (KW, KX, KY & KZ.) One block would consist of 26 call signs, i.e. WW1AAA-Z. A fee of \$1.00 per call sign (minimum 26 calls) goes to the UCSC to defray record-keeping costs.

● The Electronic Industries Association estimates there are over 450 million radios in the U.S. and another 50 million are sold yearly. Nearly one third of the U.S. population now has the capability to receive shortwave broadcasts.

● Mobile-based ku-band satellite uplink facilities proliferating! Most major cities now have firms that can immediately go to a remote location and provide "space time" and direct on-the-scene sports or news gathering for broadcasters. Satellite time has come down to the \$15/minute range with a five minute minimum. Some broadcasters have their own SNG (satellite news gathering) trucks. (Cost is about \$250,000 each!)

● Expect a big First Amendment fight from a broadcast and journalist consortium now considering launching a "Mediasat" remote-sensing satellite. Called the ultimate news gathering device, the satellite will have the capability to zoom in from space on any object as small as 20 feet in diameter located any place in the world in real time! The Land Remote-Sensing Commercialization Act of 1984 requires companies wanting to launch such a satellite to have government approval. Free speech and freedom of the press is clashing with national security!

● The days are numbered for fishing vessels and individual fisherman that use the 160 meter ham band for illegal fish radio beacons. Due to the efforts of Florida amateur, Henry Lehrman, W4PZV, the FCC will issue a warning letter with a deadline for beacon operation to cease. The FCC will take enforcement action against those disregarding the warning. W. E. Ours, Chief, Enforcement Division, asked for assistance from the amateur community in providing "fresh" information.



● You have probably never heard of it, but "The Blank Box Newsletter" (100 Bridge St. #27, Hot Springs, AR 71901 1-501-321-1845) covers the underground black box and de-scrambling world. In fact, the newsletter used to be called The Black Box News until they found out that someone already copyrighted that title. While we don't recommend the publication, it is interesting to read - obviously printed out on a laser printer. They seem to specialize in the area between those that feel they should be able to do what they want to in the privacy of their own home and those that seek to sell programming transmitted via radio waves. A recent issue covered mind and body control by the Soviet Union using low level electronic radio frequencies. Their classifieds offer all sorts of illegal VC chips, warranty stickers, black box solutions ...and such.

● New York State Gov. Mario Cuomo has signed legislation making the theft of cable TV service an automatic Class A Misdemeanor punishable by a fine up to \$1,000 and/or a year in jail. No longer is a cable company required to prove theft was more than \$100. New law takes effect November 1.

● Starting Oct. 16, J.C. Penney joins the 24 hour TV shopping fray. Pat Boone and other celebrities will host. Penney is also testing an interactive cable shopping service in Chicago.

● It hasn't been announced yet, but (as previously reported) Bradley P. Holmes, 33, Chief of the FCC's Mass Media Bureau's Policy and Rules Division is the White House choice to fill the fifth and final Commissioner slot vacated by Mark Fowler. Holmes, a black, graduated from Georgetown Law School in 1978. He is a former assistant to FCC Chairman Dennis Patrick. Holmes has not yet confirmed that he will indeed be appointed - although he is aware of it. We understand that the reason that the appointment has not been announced is fear that members of Congress could target Holmes during Senate confirmation hearings to punish the FCC for abolishing the "Fairness Doctrine". We have heard rumors that the White House will name Holmes during the October Senate recess thereby eliminating Senate hearings.

● "Fairness Held Unfair!" The 46 year old "Fairness Doctrine" that the FCC struck down three weeks ago holds that radio/TV stations have an obligation to present all major viewpoints on public issues and provide opportunities for response. Congress naturally felt this was "fair" - broadcasters considered it a burden. Station renewal proceedings every five years always considered how a station handled the Doctrine. The print media isn't affected by the Fairness Doctrine and may (and does) "editorialize" and report the news without their coverage being second-guessed by government officials. It all came to an end on August 4th when the FCC scrapped the Doctrine as being unconstitutional on First Amendment grounds. Legislators were infuriated! We understand that Congress intends to resurrect the Fairness Doctrine by tagging it to veto-proof legislation. New FCC Chairman Dennis Patrick has rankled Congress ...some called it courageous - others less than that. In any event, the honeymoon between Patrick and Congress is definitely over.

● Several members of the Texas VHF Society, the recognized frequency coordinator in Texas, are calling for a complete overhaul of Society rules and policies - particularly in view of the recent law suit into their practices. Charged is that the Society is abusing its power, operating in secret and unfairly coordinating repeaters. A letter being circulated asks that Wayne Green, W2NSD/1, (who commented on the Texas coordination problem in his August issue) be sent input from Texas repeater owners/users for objective arbitration.

● Bothered by interference from Personal Computers? The FCC has a new measurement procedure document MP-4 dated July 1987 entitled "FCC Methods of Measurement of Radio Noise Emissions from Computing Devices." To assist industry, the Office of Engineering and Science will also offer four tutorials in October at the FCC Laboratory in Columbia, Maryland, on the testing of personal computer systems. (Tel: 301-725-1585)

● Sharp Electronics will introduce a new telephone answering machine in October that will use IC chips to digitally store messages instead of magnetic tape. List will be \$300.



A U.S. VE team has been set up in Bangkok and license preparation/testing material forwarded. Ham program being advertised in the Embassy newsletter "Around Bangkok." Two of the three team members have to drive 70 and 150 miles to Bangkok to participate. Thailand (effective August 4th - National Communications Day) has authorized amateur club station operation. American, German and British nationals are petitioning their governments to pursue reciprocal licensing agreements. The Bangkok Club will operate on 14.197 MHz Friday through Sunday. Best time, about noon.

● QST (the journal of the American Radio Relay League) has a completely new advertising staff. Bruce O. Williams, WA6IVC, a former Swan Electronics Corp. general manager replaces Lee Aurick, W1SE, who has retired to Florida. League also looking for a Deputy Advertising Manager (starting salary \$18,954-\$22,750) to replace Sandy Gerli, AC1Y, who has left for greener pastures.

● On August 12th, The Foundation for Amateur Radio announced the winners of 25 scholarships which it administers:

- \$1000 Joseph E. Renard, Thurmont MD KA3LVF  
\$900 David Swiatlowski, Camillus NY KA2KLM  
\$900 R. Westenberger, Springfield IL N9DKR  
\$750 Carol A. Dunlap, Southwick MA N1EHS  
\$750 Lora E. Katz, Bowie MD N3DOH  
\$650 Diane Willemin, Elyria OH KE8DJ  
\$600 Annette Barnhart, Mt. Pleas. PA N3DKT  
\$600 Ariel Ben-Porath, Natanya Israel 4Z4WJ  
\$600 P. Hoffman, Sinking Spring PA KA3PVC  
\$600 Doug. Kleemann, Shawano WI KA9LWN  
\$600 Eric B. Koester, Spencer IA KA0YWN  
\$600 Doug. Swiatlowski, Camillus NY KA2KMT  
\$600 Mike Krensavage, Marietta GA KA3CUP  
\$600 Keith L. Watson, Galesburg IL WB9KHL  
\$500 Tom W. Larsen, Eugene OR NY7D  
\$500 Nathan Willingham, Bevier MO KA0UFO  
\$500 Doug. Benish, Pittston PA N3CXB  
\$500 Brian Withnell, Federalsburg MD KB3IU  
\$500 Maurice DeVids, College Park MD NE3S  
\$500 Scott M. Cronin, Hollywood FL WS4E  
\$500 David P. Tancrell, Palm Bay FL KB4GIA  
\$500 Lisa A. Adler, E. Lempster NH KA1MDT  
\$500 David S. Katz, Bowie MD N3DKV  
\$500 Thomas A. Foy, Sterling VA N4HAI  
\$350 Richard Kordick, Creston IA KE0AS
- Scholarships were open to all amateurs meet-  
ing various sponsor qualifications.

● A decision should be forthcoming this fall on whether the "Baby Bell's" (the AT&T spinoff telcos) will be allowed to enter the online information business. If Judge Greene approves, you could see your local telephone company providing database access, online banking, voice storage/retrieval (a digital answering service), electronic document services (ordering/invoicing, etc.), remote meter reading, alarm monitoring, electronic white/yellow pages and other directories ...even a new national information service similar to France's successful "Minitel" system. Ex-FCC Chairman Richard Wiley, argued for the American Newspaper Publishers Association against lifting the ban. The Bell Companies said that Wiley was really asking the court to protect the newspaper advertising monopolies from competition. Customer access terminals are estimated to cost \$100 to \$150 (or can be leased). There will also be a monthly charge for the services used.

● Should computer screen displays be copyrightable? The Library of Congress wants to know! They invite written comments and will hold public hearings on September 9th. Officials hope to determine whether they should register screen displays separately from the computer programs that generate them. Comments due: Oct. 9 (Library of Congress, Dept. #100, Wash., DC 20540)

● The United States is quickly tripling its efforts to stop unwanted emissions from computers, printers, telephones and other electronic equipment to prevent "antenna spies" from stealing classified government secrets. So says researcher, Frost & Sullivan in a 248-page (\$1,950) report. "As each new spy story on antennas on Embassy roofs has been made clear, even the stray radiation given off by a personal computer can be an espionage bonanza." The U.S. is using more computers and storing more data and classifying more material as "secret" than ever before. The government is now buying data processing equipment that has been modified to signal suppression specifications. "Each portion of an electronic device is viewed as a transmitter -- and design features such as minimized electric currents, board wiring and cable lengths are among the measures taken, along with special shielded connectors and cables, coating and seals," the report states.



● Kenwood has a new 2 meter/70 cm (450 MHz) **TW-4100A Dual Band Transceiver**. (45 watts on 2, 35 on 450) The 'less than 4 pound' radio is only 2" high and 6" wide and has all the memory bells and whistles. Separate antenna ports for VHF/UHF. List: \$649.95

● Zenith is in the process of introducing two **vertical VCR's** (video cassette recorders) 6" wide and a foot tall. I guess you install them beside your television rather than on top or underneath.

● "**People Meters**", electronic remote control devices that record the TV viewing behavior of everybody in a household, are in the process of being expanded by such audience measuring companies as A. C. Nielsen. Some of the gadgets with infrared sensors have the capability to determine when people go in and out of the television room. The "diary system" was designed some 30 years ago when the average viewer watched three channels. Now they have 30 or more! Few people take the time and effort to keep their diary up with today's channel hopping. Advertisers are learning that "People Meter" ratings are much lower than those that were diary based.

● A neat system for **keeping up with product warranty periods** has been developed by a camera company! A tamperproof electronic chip starts showing elapsed time once the product is first used. The length of warranty time is indicated on a visual LCD data display. The chip, which has an internal battery with a longer life than the warranty period, can be programmed to change from green to red when the warranty period is up. Eliminated is the need for warranty cards and manufacturer record keeping.

● AT&T is testing their "E-card", ("E" for experimental.) Business travelers insert the plastic credit card with embedded EEPROM (electrically erasable) chips at AT&T **Public Phone Plus** stations. The number is then speed dialed after determining the wanted number from a CRT-screened personal phone directory. All calls are automatically billed to a preselected account number. Cards can also be used to store medical profiles for emergency room use ...and act as ATM bank withdrawal cards. Cards are consumer updated at the **Phone Plus** terminal keypad.

● Rumors are that computer hobbyists are looking at the possibility of establishing a **Low Frequency Packet Radio System** ...a so-called "Radio Modem" that operates below the AM broadcast band at 160-190 KHz. One theory has it that unlicensed operation using one watt of power to a 50 foot vertical is legal on this spectrum. The network would be non-amateur with no tests or Morse code required. Any type of communication -- including commercial -- would be lawful. The ITU (WARC-79) **Table of Allocations** shows this band to be assigned to the Fixed Service.

● The **Frequency Committee** of the **Academy of Model Aeronautics (AMA)** appears interested in extending amateur Novice privileges down to the six meter level. This would permit Novice ham operators to use 6 meters to fly radio-controlled model aircraft at 50 MHz and avoid the QRM at 72 MHz. It also might be a novel way of increasing the ham ranks with, hopefully, many upgrading further. Feelers are being put out to the ARRL to see what they think of the idea. A petition might be the eventual outcome. AMA's address is: 1810 Samuel Morse Drive (believe it or not), Reston, VA 22090. A powerful group, they have 120,000 members!

● **R. K. Adams, N4BAQ**, WCARS-VEC delegate, has filed a **Petition for Rulemaking** on behalf of all thirteen organizations in attendance at the **1987 Conference of VEC's**. The petition, which was specifically requested by all VEC representatives in attendance, asks that §Section 97.29(c) be amended to provide for a Morse code test in excess of five minutes by adding the word "minimum." The petition further requests that the wording of §Section 97.21(b) revert back to the previous requirement that telegraphy test applicants are "responsible for knowing and may be tested on, the 26 letters of the alphabet, the numerals 0-9, the period, the comma, the question mark, **AR, SK, BT and DN.**" Present rules require that Morse code tests contain every character and is a burden on VE's - particularly at the slower speeds.

● The new proposed rules for the §Part 95 **General Mobile Radio Service (GMRS)** appears in the August 7th **Federal Register**, Pages 29396 to 29400 should you want to read it at your local library.

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER?  
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I have never had my station or  
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wish to be a volunteer examiner.



● Now is a good time to buy a personal computer! Business is tough to come by, margins razor-thin and computer stores - struggling to survive the shakeout - are deeply discounting everything. Sears has closed 41 out of its 100 computer stores. AT&T's Data Systems Division, which lost some \$800 million last year, is giving \$100 rebates in the form of free long distance telephone time when you buy a PC. IBM and Apple are requiring their dealers to "requalify" to carry their best products. Computer stores no longer can count on walk-in traffic. They are all out "making calls" on business users. And you can generally "bargain" on price. (Also understand AT&T will introduce a new 80386 based computer this month - September.)

● Be on the lookout for "CD Video" (or "CD-V" as it is being called) - new technology that allows consumers to play digital audio and video from the same compact disc. CD-V's are the same size (5") as regular compact discs, but only carry one-third as much music (about 20 minutes). Everybody is jumping on the "Combi-Player" bandwagon ...Magnavox, Yamaha, Technics, Sony, Toshiba, Hitachi to name a few. Software (full length movies, live performances and music videos) will be available by Christmas. Cost for a Combi-Player is not cheap. (\$600 and up.) Laser disks: \$6.50 up. Now on the drawing board ...interactive CD-V's - disks you can manipulate at will.

● Another new idea being tested is marketing custom recorded audio music tapes. A customer can now walk into a store and order a high quality tape with music selected from a catalog of titles licensed from record companies. The recordings are stored on laser discs in a machine and can be dubbed onto a cassette in one-eighth of their actual playing time complete with a printed label. The record companies get between 50¢ and \$1.25 for each title put on a tape.

● Brand new, you'll be hearing a lot about "Psychoacoustics", three dimensional digital sound technology from two speakers. It's based on a mathematical model of how a human ear and brain determines where sound comes from.

● The government apparently has the same problem that amateurs do when trying to install a communications antenna. The CIA

first tried to install a "hush-hush" antenna that relays monitored foreign radio and TV broadcasts in Reston, VA, and ran into zoning problems. A new planned installation on Bull Run Mountain also ran into trouble. The tower will link a satellite earth station at Quantico with CIA headquarters (Langley AFB, VA) and ultimately the White House.

● Georgia has passed a law restricting solicitation by automatic telephone dialing equipment. Now telemarketers will have to have prior consent from telephone customers before the automatic message can be played. The legislation follows a previous order which regulated the hours when computerized dialers could be used.

● Japanese Flat & Square Dept. - Japanese Broadcasting Corp., NHK, has developed a ¼-inch thick TV screen that can be hung on the wall like a picture. Comsat/Matsushita have an electronically steerable 12" square flat Ku-band DBS (Direct Broadcast Satellite) antenna. Both are cost prohibitive now, but with mass marketing - will ultimately be consumer priced. Japan is the only country in the world with an operating DBS satellite.

● Craziest broadcast contest prize ever was given out by WYHY-FM, Nashville, TN - a \$2,000 breast enlargement operation! Winner was selected by stopping a speeding audio tape to pick up a name called in to the station over a six week period. 27-year old Patti Chunn (who left her name on the tape 60 times) was the winner of the boob job.

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## FCC LOOKS INTO NEW TV STANDARDS....

The FCC has opened a massive, wide-ranging study of new technological advancements possible for broadcast television, including HDTV - high definition television. The Notice of Inquiry (Mass Media Docket 87-268) - which runs to 21 typeset pages - was released last Thursday. (August 20) The Commission also said it would accept no new TV station applications in the top 34 television markets until further notice.

Broadcasters maintained that UHF-TV spectrum should not be handed over to land mobile interests since it would be needed later for Advanced (ATV) technologies. The FCC said, however, it will continue to

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September 1, 1987

allocate unused UHF-TV frequencies to land mobile services (such as paging) while it considers the request by the nation's broadcasters to retain this spectrum exclusively for television.

HDTV requires wider bandwidths than the 6 MHz normally allocated for television channels, but signal compression is possible. The FCC said it wants to know what television video and sound technologies and ideas are possible. The NOI is in response to a joint petition from 58 broadcast organizations who are concerned ("terrified" is a better word) about the possibility that satellite and wireline will be the major delivery means for ATV technology.

The present TV broadcast (NTSC) standard (Channels 1-13) was adopted nearly half a century ago on July 1, 1941. Color information was added to the standard in 1953, stereo sound in 1984. New TV standards in the past had to be compatible with existing television receivers in the hands of the public. In this day of digital technology and satellite transmission, this may no longer be possible.

## NEW YORK PIRATE BROADCAST UPDATE....

The August 12th Washington Post carried an interesting newspaper follow-up article on the radio pirates we covered in our last report. Federal authorities, armed with hacksaws and wirecutters, boarded the rusting 200 foot former Japanese refrigeration vessel on July 28th and dismantled their unlicensed AM/FM broadcast station.

RNI (for Radio Newyork International) had broadcasted on 1620 AM and 103.1 FM. The "Sarah", registered under the flag of Honduras, was anchored in international waters some four miles out in Long Island Sound - one mile beyond the U.S. claimed territorial limit.

Pirate broadcasters, Allan Weiner, 34, and Ivan Rothstein (aka Jeffries), 25, were handcuffed and shackled on the hot deck for 7½ hours while FCC engineers made certain that the equipment would never broadcast again. Weiner and Rothstein were quoted as saying they "scrapped together" \$50,000 to buy

the ship and refitted it with another \$20,000 worth of broadcast equipment. Evidence is, however, that much larger investor interests were behind the broadcasts.

Since the arrest, however, the trio seem to be having the time of their lives as New York media celebrities. They have appeared on many talk shows - including MTV. WNBC, one of New York's largest AM stations let them take over Studio 3B from Rockefeller Center and do on land what the FCC closed down at sea - broadcast free-form rock-and-roll.

Their broadcast, often degenerating into "adolescent chaos", included a personal attack on FCC's Alexander Zimny who coordinated the pre-dawn raid. Zimny heads up the New York FCC District Office. Listeners, who don't understand unlicensed broadcasting, are very sympathetic to the clandestine operation. The government is being portrayed as "spoil sports."

Weiner said that he had been trying to get a broadcast license for 16 years but can't afford the \$50 million it costs. In 1984 he operated a backroom 100-watter that lasted three weeks. FCC officials say there is no way to put another station in New York City. There will be in the future, however, as the AM broadcast band (at the expense of a portion of the 160 meter ham band) is shortly due for a WARC-79 100 kHz. expansion.

The viking broadcasters now face five year prison terms and \$250,000 fines on felony charges of attempting to defraud the FCC. Their U.S. District Court date is August 27. Another radio pirate, Randi Steele, apparently was not arrested since he was not on board the vessel at the time it was boarded with permission from Honduras.

Steele, the group's spokesman, says they are definitely going back to sea ...but will choose a more cooperative country and government in which to register their floating broadcast station. "Next time, Nicaragua! You haven't heard the last of us." They also might try Panama, since Panamanian registered pirate broadcast ships have been operating in the North Sea off England for years.